July 31, 2018

VIA ECFS
Marlene H. Dortch
Secretary
Federal Communications Commission
445 Twelfth Street, SW
Washington, D.C. 20554

Re: Public Safety and Homeland Security Bureau Seeks Comment on the Effectiveness of the Wireless Network Resiliency Cooperative Framework and for the Study on Public Access to 911 Services during Emergencies, PS Docket No. 11-60

Dear Ms. Dortch:

The Satellite Industry Association ("SIA")[1] submits these comments in response to the above-referenced proceeding, seeking input into the effectiveness of the Wireless Network Resiliency Cooperative Framework ("Framework") and into a future study on public access to 9-1-1 services during emergencies when wireless networks are unavailable.[2] SIA urges the Federal Communications Commission ("Commission") to ensure that operators participating in the Framework provide resilient emergency communications services that ensures public access to 9-1-1 services in times of need. By designing emergency communication networks with redundant path diversity to support public safety answer points ("PSAPs") there will be an increase in the resiliency of 9-1-1 services during a crisis.

Natural and man-made disasters are an inevitability that cannot be predicted but can be prepared for. Ensuring that access to reliable, always available emergency communications is

[1] SIA Executive Members include: AT&T Services, Inc.; The Boeing Company; EchoStar Corporation; Intelsat S.A.; Iridium Communications Inc.; Kratos Defense & Security Solutions; Ligado Networks; Lockheed Martin Corporation; Maxar Technologies; Northrop Grumman Corporation; OneWeb; SES Americom, Inc.; Space Exploration Technologies Corp.; Spire Global, Inc.; and ViaSat, Inc. SIA Associate Members include: ABS US Corp.; Analytic Graphics Inc.; Artel, LLC; Blue Origin: DataPath Inc.; Eutelsat America Corp; ExoAnalytic Solutions; Globecomm; Glowlink Communications Technology, Inc.; Hawkeye360; Hughes Government Solutions; Inmarsat, Inc.; Kymeta Corporation; L3 Technologies.; Panasonic Avionics Corporation; Planet; Telesat; TrustComm, Inc.; Ultisat, Inc.; and XTAR, LLC. For more information, visit www.sia.org.

[2] Public Safety and Homeland Security Bureau Seeks Comment on Effectiveness of the Wireless Network Resiliency Cooperative Framework and for the Study on Public Access to 911 Services during Emergencies, PS Dkt. No. 11-60 (Jun. 13, 2018) ("*Public Notice*").

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critical. One significant way to create this level of reliability is to design emergency networks with technological path diversity for backhaul services into the PSAPs. Unfortunately, today many operators utilize duplicate technologies to offer backhaul, often resulting in the backup service sharing the same pipeline as the primary service. When the primary and backup service fail to achieve path diverse redundancy, they are exposed to the same risks during a disaster. By employing satellite-enabled backhaul, operators are able to provide a proven, resilient, and dependable infrastructure to ensure continuous connectivity with emergency services at all times, and especially when terrestrial networks are damaged or otherwise unavailable.[3]

By designing 9-1-1 networks that rely on technological path diversity, consumers in disaster-affected regions will be able to rely on 9-1-1 during and in the immediate aftermath of an event. The need for reliable communications, including emergency services, has not been lost on residents and businesses located in areas affected by the most recent hurricane season. Puerto Rican organizations are calling on the Commission to ensure that communications networks built using federal funds contain a satellite broadband component in order to ensure adequate resiliency.[4] Moreover, some of these same organizations are collaborating to develop their own resilient, redundant satellite broadband infrastructure, as first-hand experience demonstrated to them, during a hurricane, satellite broadband was the only reliable service available.[5]

Satellite technology offers a diverse portfolio of solutions for enhancing the resiliency of communications infrastructure to withstand and respond to emergency situations. SIA has recently published its *First Responders' Guide to Satellite Communications* (Exhibit 1), which provides examples of the many ways satellite technology can be integrated and deployed to aid first responders in their relief efforts.[6]

SIA supports the Commission's efforts to evaluate the effectiveness of the protocols in place to ensure the resiliency of emergency 9-1-1 communications services. The Commission

[3] *See generally*, Satellite Industry Association, "First Responders' Guide to Satellite Communications" ViaSatellite (2018). Available at: https://www.satellitetoday.com/first-responders-guide-to-satellite-communications/.

[4] *See* Comments of Liga de Cooperativas de Puerto Rico, WC 18-143 et. al., Jul. 2, 2018 ("Liga de Cooperativas Comments") ("Satellite broadband was the only reliable communications system [*sic*] in the aftermath of the hurricanes and must be fully implemented across the island to build a truly resilient and connected Puerto Rico."); *see also* Comments of the Puerto Rico Manufacturers Association, WC 18-143 (Jul. 3, 2018) ("PRMA Comments"); see also Casa Pueblo, WC 18-143 et. al (Jul. 5, 2018) ("Casa Pueblo Comments").

[5] *See* Liga de Cooperativas Comments; *see also* Casa Pueblo Comments (both comments refer to the establishment of the Centros de Preparacion y Respuesta (CPR), a satellite connected network of member organizations across Puerto Rico that will ensure residents of the communities they serve will remain connected to each other, emergency services, community organizations – schools, hospitals, fire departments, government agencies, etc. – regardless of the emergency situation.)

[6] Note 3 *infra*.

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should encourage resiliency measures are built into communications infrastructure, including encouraging technological path diversity for PSAPs. The best way to mitigate the damage that can be caused to communications networks by disasters is to design the networks to withstand them. The adoption of path diversity for backhaul to PSAPs is a positive step towards ensuring people in disaster-stricken regions can reach emergency responders on a timely basis.

Accordingly, the Commission should encourage Framework participants to take steps to include technological path diversity in their network design in order to work towards the provision of more resilient 9-1-1 services. Moreover, SIA and its members look forward to the opportunity to provide additional information to the Commission on the advantages of adding satellite technology into communication network designs over the course of the study on the public safety benefits, technical feasibility, and cost of providing the public with access to 9-1-1 services during times of emergency pursuant to Title III, Section 301 of RAY BAUM'S ACT.[7]

Respectfully submitted,

/s/

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[7] Public Notice at pg. 2.

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